

The Examiner is respectfully requested to amend the above-identified application as follows:

IN THE SPECIFICATION:

Please substitute the paragraph starting at page 25, line 16 and ending at page 26, line 4 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--In the case of the conventional example, since the angles of the V-grooves of the second region 13b and the first region 13a are equal, angles of refraction are large as illustrated in Figs. 5A to 5C, and the lens size on the light reception side and the spacing between the light-receiving elements 6 are also large, thereby increasing the dimensions of the detection head as a result. On the other hand, for example, when the angles of the V-grooves of the second region 13b are smaller than those of the first region 13a as in the present embodiment, the angles of refraction in the second region 13b become smaller as illustrated in Fig. 22A, whereby the size of the lens 12 and the spacing between the light-receiving elements 15a, 15b, 15c can be made smaller as illustrated in Fig. 22B, thereby making the detection head compact.--

Please substitute the paragraph starting at page 37, line 9 and ending at page 37, line 19 with the following replacement paragraph. A marked-up copy of this paragraph, showing the changes made thereto, is attached.

--The optical encoders described above are constructed so that all the components are placed on one side of the optical scale, and thus the axial height is small. Since the optical encoders